Agenda

TUESDAY, NOVEMBER 14 GREAT HALL

8:00 - 11:00 p.m. Poster session and mixer

WEDNESDAY, NOVEMBER 15 GREAT HALL

9:00 a.m. Welcome and introduction, M. S. Allen, Chairperson

9:10 a.m. #1 RUMEN EVACUATION TECHNIQUES TO DETERMINE AND COMPARE PASSAGE RATE MARKERS.
D. I. Harvatine and J.L. Firkins, Department of Animal Sciences, The Ohio State University

9:30 a.m. #2 EFFECT OF DIET FERMENTABILITY ON EFFICIENCY OF MICROBIAL N PRODUCTION.
M. Oba, and M. S. Allen. Department of Animal Science, Michigan State University

9:50 a.m. #3 SOLAR RADIATION'S IMPACT ON PROPORTION OF FIBER FRACTIONS AND IN VITRO DIGESTION KINETICS OF TROPICAL FORAGES.
J. R. Carpenter, N. K. Ranjit and R. Y. Niino-DuPonte, Dept. of Human Nutrition, Food and Animal Sciences, University of Hawaii at Manoa

10:10 a.m. #4 IMPROVING THE AEROBIC STABILITY OF SILAGES WITH *LACTOBACILLUS BUCHNERI.* L. Kung, Jr., N. K. Ranjit, and C. C. Taylor. Department of Animal & Food Sciences, University of Delaware, Newark

10:30 a.m. #5 AMYLOLYTIC BACTERIA THAT PREVENT LACTATE ACCUMULATION DURING *IN VITRO* RUMINAL FERMENTATIONS
[1]F. Rodriguez, [2]M. Rasmussen, and [1]M. Allison. [1]Department of Microbiology, Iowa State University, [2]National Animal Disease Center, USDA, Ames, IA

10:50 a.m. Break

11:10	#6	PH AND RUMINAL ACID-BASE BALANCE OF LACTATING COWS FED WITH MAIZE SILAGES. I. Fernandez[1], H. Brugère[2], B. Michalet-Doreau[1]. [1]INRA, URH-DIM, 63122 St Genès Champanelle, FRANCE, [2]Ecole Nationale Vétérinaire d'Alfort. Laboratoire de Physiologie Thérapeutique, Cedex, France
11:30 a.m.	#7	**INVITED PRESENTATION – Richard A. Kohn, Ph.D.** **THREE CONDITIONS OF THE RUMINAL MILIEU THAT DETERMINE PH.** Contact Information: Dept. Animal and Avian Sci., University of Maryland, College Park Rkohn@wam.umd.edu, 301-405-4583
12:30 p.m.		Lunch at your discretion
2:30 p.m.	#8	NOVEL APPROACHES FOR INHIBITING RUMEN METHANOGENESIS. E. M. Ungerfeld, S. R. Rust, M. K. Jain and R. Burnett, Michigan State University, East Lansing
2:50 p.m.	#9	EFFECT OF COCONUT OIL ON TOTAL TRACT METHANOGENESIS AND RUMINAL METHANOGENS IN FAUNATED AND DEFAUNATED SHEEP. A. Machmüller, C. R. Soliva, and M. Kreuzer, Institute of Animal Sciences, Swiss Federal Institute of Technology (ETH), Zurich
3:10 p.m.	#10	ISOLATION AND IDENTIFICATION OF A BACTERIUM THAT INHIBITS HYPERAMMONIA PRODUCING BACTERIA. J. L. Rychlik and J. B. Russell. Department of Microbiology, Cornell University and Agricultural Research Service, USDA, Ithaca, NY
3:30 p.m.	-	**INVITED PRESENTATION – Prof. Abigail A. Salyers, Ph.D.** **GENETIC BASIS FOR ANTIBIOTIC RESISTANCE IN BACTERIA AND ITS RELEVANCE TO AGRICULTURE** Contact Information: Dept. of Microbiology, University of Illinois, Urbana, IL 61801 **abigails@life.uiuc.edu**, (217) 333-7378
4:30 p.m.		Break
4:50 p.m.	#11	ANALYSES OF ANTIBIOTIC RESISTANCE GENES IN ANAEROBIC BACTERIA AND TOTAL DNA FROM SWINE MANURE. T. R. Whitehead and M. A. Cotta. USDA/ARS, Natl. Cent. Agric. Utilizn. Res., Peoria, IL

5:10 p.m. #12 TETRACYCLINE RESISTANCE GENES IN GROUNDWATER IMPACTED BY SWINE LAGOON WASTE.
J. Chee-Sanford[1], R. Aminov[1], N. Garrigues[1], I. Krapac[2], and R. Mackie[1], Dept. of Animal Sciences[1], University of Illinois-Urbana, and Illinois State Geological Survey[2], Urbana, IL

5:30 p.m. Dedication of the XXV Conference on Rumen Function, M. Allison

5:45 p.m. Dinner at your discretion

THURSDAY, NOVEMBER 16 GREAT HALL

8:30 a.m. #13 EFFECT OF SODIUM CHLORATE ON IN VITRO RUMINAL FERMENTATIONS.
T. R. Callaway, R. C. Anderson, S. A. Buckley and D. J. Nisbet. USDA/ARS, SPARC, College Station, TX

8:50 a.m. #14 THE ROLE OF LIPOTEICHOIC ACIDS IN THE RESISTANCE OF STREPTOCOCCUS BOVIS TO NISIN.
H. C. Mantovani and J. B. Russell, Section of Microbiology, Cornell University and Agricultural Research Service, USDA, Ithaca, NY

9:10 a.m. - **INVITED PRESENTATION- Karen Nelson, Ph.D.**
INCREASING OUR UNDERSTANDING OF BIOLOGICAL SYSTEMS WITH MICROBIAL GENOME DATA
Contact Information: The Institute for Genomic Research, 9712 Medical Center Drive, Rockville, MD 20850 KENelson@tigr.org, 301-838-3565

10:10 a.m. Break

10:30 a.m. #15 PCR SCREENING OF THE RUMEN MICROBIAL META-GENOME FOR *luxS* SEQUENCE HOMOLOGUES.
D. A. Antonopoulos, K. A. D. Piggott, B. A. White, Department of Animal Sciences, University of Illinois, Urbana

10:50 a.m. #16 THE RUMINOCOCCUS ALBUS 7 BACTERIOCIN: AN UNEXPECTEDLY LARGE PROTEIN WITH HOMOLOGY TO ENDOGLUCANASES.
J. Chen, D. M. Stevenson, and P. J. Weimer, Dept. of Bacteriology, Univ. of Wisconsin-Madison, and USDA-ARS, U.S. Dairy Forage Res. Center, Madison, WI

11:10 a.m. #17 DISTRIBUTION OF TETRACYCLINE RESISTANCE DETERMINANTS ENCODING RIBOSOMAL PROTECTION PROTEIN GENES IN ANIMAL PRODUCTION SYSTEMS.
N. Garrigues, R. I. Aminov, R. I. Mackie, Dept. of Animal Science, University of Illinois, Urbana

11:30 a.m. Business Meeting

12:00 noon Adjourn

Posters

#18 METHOD TO MEASURE FRACTIONAL RATE OF VOLATILE FATTY ACID ABSORPTION FROM THE RUMEN.
M. S. Allen[1], L. E. Armentano[2], M. N. Pereira[2], Y. Ying[1] and J. Xu. Michigan State University[1] and University of Wisconsin, Madison[2]

#19 THERMODYNAMICS OF RUMINAL FERMENTATION.
R. A. Kohn, Dept. Animal and Avian Sci., University of Maryland, College Park, MD

#20 IS RUMINAL VISCOSITY INVOLVED IN THE MICROBIAL FIBROLYTIC ACTIVITY DECREASE WITH HIGH CEREAL DIET?
C. Martin, I. Fernandez, Y. Rochette, B. Michalet-Doreau. INRA, URH-DIM, 63122 St Genès Champanelle, FRANCE

#21 SELECTED-ION-FLOW-TUBE MASS SPECTROMETRIC ANALYSIS OF RUMEN GASES.
R.J. Dewhurst[1], R.T. Evans[1], P. Spanel[2] and D. Smith[3], [1]Institute of Grassland and Environmental Research, Aberystwyth, [2]J. Heyrovsky Institute of Physical Chemistry, Prague, Czech Republic and [3]Centre for Science and Technology in Medicine, Keele University, Stoke-on-Trent

#22 AMMONIA PRODUCTION AND PROTEIN DEGRADABILITY AS AFFECTED BY FOOD SOURCES AND PURIFIED MONENSIN OR RUMENSIN.
R.P. Lana, N.G.S. Barbosa, A.B. Mancio. Dept. de Zootecnia, Univ. Fed. Vicosa, 36571-000, Vicosa, MG, BRAZIL

#23 EFFECTS OF MONENSIN AND LASALOCID ON FERMENTATION OF AMINO ACIDS BY MIXED RUMINAL BACTERIA.
R.P. Lana, J.S. Oliveira, R.G. Veloso, P.M.M. Nunes, A.C. Borges. Dept. de Zootecnia, Univ. Fed. Vicosa, 36571-000, Vicosa, MG, BRAZIL

#24 MICROBIAL FERMENTATION IN CONTINUOUS CULTURES RECEIVING FAT BEFORE OR AFTER THE ADDITION OF AN IONOPHORE.
M. Croucher and V. Fellner, Department of Animal Science. North Carolina State University, Raleigh

#25 DISTRIBUTIONS OF MICROBIAL MASS AND FIBROLYTIC ENZYME ACTIVITIES IN DIFFERENT SIZE OF FEED PARTICLES FROM RUMEN CONTENTS OF SHEEP
J. Pan, T. Suzuki, K. Ueda, K. Tanaka, and M. Okubo, Graduate School of Agriculture, Hokkaido University, Sapporo-shi

#26 USE OF *IN VITRO* FERMENTATION FOR DETERMINING THE POTENTIAL CONJUGATED LINOLEIC ACID (CLA) PRODUCING CAPACITY OF RUMINANT DIETS.
E. Frantz, R. Robinson, B. Jacobson, and K. Griswold, Department of Animal Science, Food and Nutrition, Southern Illinois University, Carbondale

#27 CONCENTRATIONS OF *TRANS*-18:1 AND CLA IN TISSUES OF LAMBS FINISHED ON DIFFERENT DIETS.
D. L. Palmquist, K. E. McClure, G. D. Lowe and D. D. Clevenger, Dept. of Animal Sciences, OARDC/OSU, Wooster

#28 VARIATION IN THE CONCENTRATIONS OF ODD-CHAIN FATTY ACIDS IN MILK.
[1]R. J. Dewhurst, [1]J.K. S. Tweed and [2]G. B. Williams, [1]Institute of Grassland and Environmental Research, Aberystwyth, U.K. and [2]Institute of Rural Studies, University of Wales, Aberystwyth

#29 VARIATION IN THE CONCENTRATIONS OF ODD-CHAIN FATY ACIDS IN RUMEN BACTERIA.
[1,2]G. S. Bae, [2]M. B. Chang, [3]W. J. Maeng, [1]R. J. Dewhurst, [1]D. R. Davies and [1]R. J. Merry. [1]Institute of Grassland and Environmental Research, Aberystwyth, [2]Department of Animal Science and Technology, Chung-Ang University, Ansung, Korea and [3]College of Animal Husbandry, Kon-Kuk University, Seoul, Korea

#30 EFFECTS OF FIBROLYTIC ENZYMES ON DEGRADATION OF ALFALFA HAY FIBER BY MIXED RUMEN MICROORGANISMS.
V. L. Nsereko, D. P. Morgavi, L. M. Rode, K. A. Beauchemin, T. A. McAllister, Agriculture and Agri-Food Canada, Lethbridge, AB

#31 A TRICHODERMA FEED ENZYME PREPARATION ENHANCES ADHESION OF FIBROBACTER SUCCINOGENES TO COMPLEX SUBSTRATES BUT NOT TO PURE CELLULOSE.
D. P. Morgavi, V. L. Nsereko, L. M. Rode, K. A. Beauchemin, T. A. McAllister, Y. Wang. Agriculture and Agri-Food Canada, Lethbridge, AB

#32 EFFECT OF LEVELS OF WHOLE COTTONSEED ON RUMINAL VOLATILE FATTY ACIDS, PH AND AMMONIA.
O. Balbuena, C. L. Arakaki, C. D. Kucseva and G. A. Kosa. INTA Colonia Benitez, CP 3505, ARGENTINA

#33 EFFECT OF LEVELS OF WHOLE COTTONSEED ON RUMINAL PROTOZOA.
C. L. Arakaki, O. Balbuena, C. D. Kucseva and G. A. Kosa. INTA Instituto de Patobiologia Castelar, ARGENTINA

#34 MICROBIAL ACTIVITY IN GRASS-FED *IN VITRO* CONTINUOUS CULTURES IN RESPONSE TO INFUSION OF GRADED LEVELS OF SOLUBLE SUGARS.
M. R. F. Lee[1], J. M. Moorby[1], J. C. Macrae[2], M. K. Theodorou[1],R. J. Merry[1], D. R. Davies[1] and N. D. Scollan[1], [1]Institute of Grassland and Environmental Research, Plas Gogerddan, Aberystwyth, UK [2] Rowett Research Institute, Greenburn

#35 EFFECTS OF BUFFERS ON pH AND MICROBIAL METABOLISM IN CONTINUOUS CULTURE OF RUMEN CONTENTS.
L. M. Aga, R. J. Koski and M. D. Stern, Dept. of Animal Science, University of Minnesota, St. Paul

#36 INFLUENCE OF PATULIN LEVEL ON FERMENTATION BY RUMINAL MICROBES IN CONTINUOUS CULTURE.
M. O. Tapia, M. J. Murphy, R. J. Koski and M. D. Stern, Dept. of Animal Science, University of Minnesota, St. Paul

#37 EFFECTS OF RUMEN DEGRADABLE AND UNDEGRADABLE PROTEIN ON FINISHING STEER PERFORMANCE.
C. J. Fu and M. S. Kerley, Department of Animal Sciences, University of Missouri, Columbia

#38 CHOPPING FINENESS OF MAIZE SILAGE AND REDUCTION OF PARTICLE SIZE IN RUMEN.
I. Fernandez, A. Garcia-Rodriguez, B. Michalet-Doreau, INRA, URH-DIM, St Genès Champanelle, FRANCE

#39 IN SITU DISAPPEARANCE OF FIRST HARVEST ALFALFA HAY AS AFFECTED BY STAGE OF MATURITY AND CUTTING TIME.

H. S. Hussein[1], H. F. Mayland[2], J. P.Tanner[1], H. Tokuyama[1], and G. C. J. Fernandez[3]. School of Veterinary Medicine[1] and Department of Applied Economics and Statistics[3], University of Nevada-Reno, Reno, and USDA- ARS[2], Kimberly, ID

#40 IN SITU DISAPPEARANCE OF THIRD HARVEST ALFALFA HAY AS AFFECTED BY STAGE OF MATURITY AND CUTTING TIME.

H. S. Hussein[1], H. F. Mayland[2], S. L. Lake[1], H. Han[1], and G. C. J. Fernandez[3]. School of Veterinary Medicine[1] and Department of Applied Economics and Statistics[3], University of Nevada-Reno, Reno, and USDA-ARS[2], Kimberly, ID

#41 REDUCING NITROGEN LOSSES FROM STORED COW SLURRY USING ORGANIC TREATMENTS.

D. F. McCrory[1], P. J. Hobbs[1], E. Bakewell[2] and R. J. Merry[2] Institute of Grassland and Environmental Research, [1]North Wyke Research Station, Okehampton, Devon, UK, [2]Aberystwyth Research Centre, Aberystwyth, UK

#42 AMMONIA FLUXES FROM LAGOONS AND FEEDING AREAS OF A 190-COW DAIRY.

R. L. Kincaid[1], B. Rumburg[2], G. H. Mount[2], J. Havig[2], K. A. Johnson[1], H. Westberg[2], and B. Lamb[2], [1]Dept. of Animal Sciences, and the [2]Laboratory for Atmospheric Research, Dept. of Civil and Environmental Engineering, Washington State University, Pullman

#43 NUTRIENT MANAGEMENT OF BROILER LITTER FOR BEEF CATTLE ON PASTURE.

J. P. Fontenot, N. B. Frank, R. K. Shanklin and V. G. Allen, Dept. of Animal and Poultry Sciences, Virginia Polytechnic Institute and State University, Blacksburg

#44 EFFECTS OF pH ON VIABILITY AND GROWTH OF ENTODINIUM CAUDATUM, ENTODINIUM EXIGUUM, EPIDINIUM CAUDATUM, AND OPHRYOSCOLEX PURKYNJEI IN VITRO.

Burk A. Dehority, Dept. Of Animal Sciences, Ohio Agricultural Research and Development Center, The Ohio State University, Wooster, OH

#45 EFFECT OF SUPPLEMENTAL PROTEIN TYPE ON RUMINAL BACTERIA POPULATIONS IN WHITEFACE WETHERS CONSUMING MEDIUM QUALITY GRASS HAY.

S. L. LODGE, M. W. SALISBURY, T. T. ROSS, AND T. MAY, Department of Animal and Range Science, New Mexico State University, Las Cruces, NM

#46 PROBIOTIC EFFECTS ON RUMEN FUNGI.
R. Calza, J. Chang, J. Schmidt, S. Albright, and G. Calza. Department of Animal Sciences, Washington State University, Pullman

#47 ISOLATION, CHARACTERIZATION AND STUDY OF HYDROLYTIC ACTIVITIES OF ANAEROBIC RUMEN FUNGI FROM RIVERINE BUFFALO (Bubalus bubalis)
Amit Singha and S. Neelakantan, Dairy Microbiology Division, National Dairy Research Institute, Karnal, India

#48 ANGIOTENSIN CONVERTING ENZYME (ACE) INHIBITORY ACTIVITY IN PEA PROTEIN FERMENTS AND HYDROLYSATES
V. Vermeirssen, J. Van Camp and W. Verstraete, Lab. of Microbial Ecology and Technology, Lab. of Food Technology and Nutrition, Faculty of Agricultural and Applied Biological Sciences, Ghent University, Ghent, Belgium.

#49 HEMICELLULASE ENCODING GENES OF F. SUCCINOGENES
J.K. Ha, L.M. Malburg, Jr. H. Jeon, X. Wang, S. MacLellan and C. W. Forsberg, University of Guelph, Guelph, ON

#50 ISOLATION AND CHARACTERIZATION OF LIPOPOLYSACCHARIDE-LIKE AND CAPSULAR MATERIALS FROM A PREDOMINANT CELLULOLYTIC RUMINAL BACTERIUM FIBROBACTER SUCCINOGENES S85.
E. E. Egbosimba[1], E. Vinogradov[2], M. B. Perry[2], J. S. Lam[1], and C. W. Forsberg[1]. [1]University of Guelph, Guelph ON, & the [2]Natl Research Council of Canada, Ottawa, ON, Canada

#51 THE EXTREME ACID RESISTANCE OF ESCHERICHIA COLI IS REGULATED BY AMINO ACID AVAILABILITY AS WELL AS VOLATILE FATTY ACIDS
G. N. Jarvis and J. B. Russell, Section of Microbiology, Cornell University and Agricultural Research Service, USDA, Ithaca, New York

#52 CHARACTERIZATION OF ISOLATED BACTERIAL STRAINS WITH ANTAGONISTIC PROPERTIES AGAINST FOOD-BORNE PATHOGEN LISTERIA MONOCYTOGENES.
H. Roman, E. T. Ryser, S. Rust and M. T. Yokoyama. Department of Animal Science, Michigan State University, 2265F Anthony Hall, East Lansing

#53 FACTORS AFFECTING ON THE BINDING OF THE CLONED CELLULOSE-BINDING DOMAIN, DERIVED FROM FIBROBACTER SUCCINOGENES EGF, TO CARBOXYMETHYLCELLULOSE.
Makoto Mitsumori, Hiroshi Kajikawa, and Sadahiro Ohomomo National Institute of Animal Industry, Tsukuba Norindanchi Japan

#54 CLONING OF THE O-ACETYLSERINE LYASE GENE FROM THE RUMINAL BACTERIUM SELENOMONAS RUMINANTIUM HD4.
J. D. Evans, S. F. Al-Khaldi, and S. A. Martin, Dept. of Animal and Dairy Science, University of Georgia, Athens, GA

#55 CLONING OF THE L-LACTATE DEHYDROGENASE GENE FROM THE RUMINAL BACTERIUM SELENOMONAS RUMINANTIUM HD4.
J. D. Evans and S. A. Martin, Dept. of Animal and Dairy Science, University of Georgia, Athens, GA

#56 EFFECT OF ACACIA ANGUSTISSIMA ON BACTERIAL DIVERSITY IN THE RAT CECUM.
A. H. Smith and R .I. Mackie, Department of Animal Sciences, Univ. of Illinois, Urbana

#57 COEXISTENCE OF RUMEN CELLULOLYTIC RUMINOCOCCUS , PREVOTELLA RUMINICOLA GA33 AND BUTYRIVIBRIO FIBRISOLVEN D1 GROWN IN BATCH CULTURES.
J. K. Browne-Silva and Tammy May. Dept. of Animal and Range Sciences, New Mexico State University, Las Cruces NM

#58 STABILITY OF PORCINE FECAL BACTERIAL POPULATIONS AFTER INTRODUCTION OF LACTOBACILLUS SPP.
J. M. Simpson, V. J. McCracken, H. R. Gaskins, and R. I. Mackie, Dept. of Animal Sciences, University of Illinois, Urbana

#59 APPLICATION OF GROUP SPECIFIC AMPLIFIED R-DNA RESTRICTION ANALYSIS TO DIFFERENTIATE AMONG SWINE FECAL AND WASTE STORAGE PIT SAMPLES.
C. J. Ziemer, M. A. Cotta, and T. R. Whitehead. NCAUR, ARS, USDA, 1815 University St., Peoria, IL